

**Delaware Department of Transportation
Division of Transportation Solutions
Design Guidance Memorandum**

Memorandum Number: **1-9**

1. Road Design Manual 2. Bridge Design Manual 3. Utilities Design Manual
4. Real Estate Manual 5. Standard Specifications 6. Standard Construction Details

Title: **Defining Pavement Coring and Subsurface Investigation**

Effective date: June 1, 2003

Implementation by: X Project Teams, X Bridge, Team Support,
 Specifications, Utility, Real Estate, X Quality, X DTC, Other M&R

I. Purpose:

To: 1) define “corings” and “borings” and 2) inform project designers and consultant managers of the procedures for requesting pavement cores and/or subsurface investigation (soil borings).

See also **[DGM 1-10 Pavement Design Requirements](#)** and **[DGM 1-11 Subsurface Investigation for Consultant Designed Projects](#)** for more specific details.

II. Design Guidance:

Proper terminology should be used in the request for either a “core” or a “boring.” A pavement “core” is used to determine the composite of a pavement (Portland cement concrete, hot-mix asphalt, etc.) and the depth of the pavement. A “boring” request will result in underlying soil information being obtained such as soil classification, moisture content, etc.

Cores or borings should be requested whenever the designer has questions or is unsure as to either the pavement section or underlying soil conditions. This should be done as early in the design as possible. All projects involving reconstruction, new alignment, realignment, foundation work, or significant earth work should have a subsurface investigation.

In order to obtain pavement cores and/or soil borings, information must be provided by the designer to either the Pavement Design Engineer (for cores) or the Geotechnical Engineer (for borings). Specific information that must be provided from design includes:

- Location of investigation – the road name and state maintenance number
- Specific investigation locations – if the designer has predetermined locations that they would like to investigate, they should forward a marked set of plans indicating these locations to either the Pavement Design Engineer or the Geotechnical Engineer.
- Limits of the investigation – to determine the start and end point of the investigation

- Purpose of investigation – to determine what pertinent information is required from the cores or the borings.
- If a boring is required, the depth to which the soil should be investigated. If the designer is unsure of depth to sample, contact the Geotechnical Engineer for guidance.

Coring and boring requests are typically processed within 30 days. If a coring and boring request is received simultaneously, they will be processed as one activity. If the boring request is received after the coring request has been completed, it will be treated as a different request and will be processed within 30 days of receipt.

III. Justification:

To: clarify the requirements of core and boring requests; to define the difference between pavement corings and soil borings; to define the time frame under which the investigation will occur to allow for designers and planners to request investigations in a timely manner.

Prepared by: /s/ James Pappas III 8/04/03
Chief Materials & Research Engineer Date

Recommended by: /s/ Robert J. Taylor 8/05/03
Assistant Director, Engineering Support Date

Approved: /s/ Carolann Wicks 8/10/03
Director of Transportation Solutions Date

Distribution:
Transportation Solutions Assistant Directors
Consultants
DTC Executive Director